

In the original U.S. Patent No. 6,049,895, attached hereto with this Supplemental Amendment, please amend as set forth below.

In the Specification:

In column 1, lines 25 and 32.

On the other hand, sound comparison, fingerprint comparison, retina comparison, and face comparison are effective personal confirmation means to detect [defect] an other's unjust use because the user's physical features are used as a key. However, the personal confirmation is only used at the beginning of service. After the service begins, the service can not be interrupted. Therefore [Therefore], even if an other person changes for the user after the service is begun, the service can not be interrupted. In short, this kind of service includes danger that the other person utilizes the service unjustly [unjustly]. This kind of problem is included in the memorized number, the magnetic card, the IC card and the wireless card.

In column 1, lines 35 and 36.

As mentioned [mentioned] above, the known security apparatuses include the following problems.

In column 2, line 45.

FIG. 7 is a block diagram of the security [security] apparatus according to a fifth embodiment of the present invention.

In column 2, line 52.

FIG. 9 is a flow chart of processing of the service supply permission section according to a sixth embodiment of the present [present] invention.

In column 2, line 57.

FIG. 11 is a block diagram of the security [security] apparatus according to a eighth embodiment of the present invention.

In column 4, lines 1 and 5.

The service supply permission section 2 controls start/interruption/interruption and cancellation/end of the service for the service supply section 3 according to the detection result of the situation detection section 1. In this case, the service supply permission section 2 starts the supply of the service when the user is specified in the service-use area. The service supply permission section 2 controls the supply of the service in at least one of the cases where the user does not utilize the service or where the security of the user is infringed. Especially when the

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user does not utilize the service during the supply of the service, the supply of the service finishes. If the security of the user is infringed by another person the supply of the service interrupts [interrupts] until the infringement is relieved. The service supply section 3 supplies various kinds of service under the control of the service supply permission section 2. For example an uninhabited ATM (automatic [automatic] teller's machine), a portable terminal, or a computer used by several persons may comprise the service supply section 3.

In column 4, line 15.

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FIG. 2 is a block diagram of the situation detection section 1. In this case, an image is used as a way to discriminate the user, detecting the use situation, or detect an infringement situation. The situation detection section 1 is comprised of an image input section 11, a person area detection section 12, a person comparison section 13, a use situation decision section 14 and an infringement situation decision section 15. The image input [input] section 11 inputs an image through a TV camera. The TV camera is set in the service use area for continuously observing the user to be supplied the service. The person area detection section 12 analyzes images input by the image input section 11 and monitors the secure area from the input image. For example, a difference between the input image and background image (uninhabited area) indicates a person present in the secure area. The person area detection section 12 outputs person detection information D1 when the person present is detected and outputs non-detection information D1 when the person present is not detected.

In column 4, line 45.

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The use situation decision section 14 detects whether the user is under a situation capable of using the service. After the user of the person area is registered and if the registered user is now included in the person discrimination information D2, the user is decided to be capable of using the service. The use situation decision [decision] section 14 outputs use situation information D3 representing whether the user is capable of using the service.

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In column 5, line 27.

The above process steps (step S1-S7) are the same as normal confirmation of security (from confirming the user to beginning [beginning] the supply of the service). In this place, after the supply of the service is begun, the registered user exists in the service-use area and the registered person must be detected at step S1. After the supply of the service is begun, the processing is returned to step S8 through steps S1 and S2.

In column 5, line 62.

In this way, in case the user permitted the service is specified in the service use area, the supply of the service is begun. During the supply of the service, if the user is not using the service or if the security is breached, the supply of the service finishes or interrupts. Accordingly, the security is maintained during all periods of beginning [beginning]/supplying/end of the service. For example, in case the registered user is confirmed and supplied money through an Automatic Teller Machine, or the user operates a handy terminal by watching secret information on a display, the security of the user is effectively protected according to the present invention.

In column 6, lines 8 and 10.

In the first embodiment, another person can not use the terminal while the user is supplied the service through the terminal. Therefore, the other person must wait to use the same terminal until [until] the first user finishes. In short, in the first embodiment, use by a specified user for the terminal excludes use by another [an other] person.

In column 6, line 15.

In a second embodiment, in case the situation for the user not capable of using the service is detected before the supply of the service for the user finishes, the supply of the service is reserved (interrupted) and the new user can be supplied the service from the beginning [beginning]. As a result, during the interruption of the service, a different service is supplied to another user. When the original user comes back to the terminal, the reserved service is supplied to the original user again. Therefore, while each service is not completed respectively, plural users can be supplied each service from the same terminal one after another. Additionally, if the original user does not come back to the same terminal, the reserved service is finished and memory area corresponding to the reserved service is relieved to save memory resources.

In column 6, lines 41, 46, and 63.

In this place, assume that a user A creates a document using a terminal A and leaves from the terminal A without completing the work. The terminal A detects that the user A is not using the service ("No" at step S8) and that the supply of the service is not completed ("No" at step S15). The service of creating the document at the present time is stored (reserved) in a memory area of the terminal and the supply of the terminal [terminal] is interrupted (step S16, S17). In this case, the situation for the user not using the service is detected according to the use situation

information D3. Completion situation of the supply of the service is decided by completion notice sent by the user. Next, a user B is confirmed by the terminal [terminal] A and works through the terminal A. Assume that when the user A comes back to the terminal A, the user B goes away from the terminal A. The terminal A newly reserves the results of the service for the user B (steps S8, S15, S16, S17) and begins the supply of the reserved service to the user A (steps S8, S11, S13, S14). The memory area to store the result of the service is commonly used by each terminal on the network. Therefore, if the user B is confirmed by a terminal B (steps S4, S6, S7), the reserved result of the service for the user B is supplied through the terminal B (steps S8, S11, S13, S14). On the other hand, if the user A does not come back to the terminal A during a predetermined time ("Yes" at step S18), the terminal A finishes the service of the user A immediately and relieves the memory area corresponding to the service result of the user A (steps S9, S10). In this way, a situation of storing many service results in memory area is prevented. The predetermined time as decision [decision] standard at step S18 is freely set by the kind of the service.

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In column 6, line 66 and column 7, lines 1 and 2.

As mentioned above, in the second embodiment, the supply of the service for each user is reserved until [until] the work of each user is completed. In short, a right service-use generated by confirming the user is assured until [until] the user's work is completed. The user B does not have to wait until [until] the user A finishes using the terminal. By changing the user A for the user B, the user B can use the terminal without infringement for the security of the user A.

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In column 7, line 6.

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(b) Extension [Extention] for unspecified user (third embodiment)

In column 7, lines 44 and 45.

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In the fourth embodiment, when an infringement situation of the security is detected, a warning is sent to the user. In this case, the service supply permission section 2 controls [controls] the beginning [beginning] and end of the service and does not execute interruption and cancellation of the service in case of infringement of the security.

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In column 8, line 17.

The interactive control section 4 receives an indication of the user for the warning of the infringement and controls the supply of the service according to the indication. The kind of the indication is continuation/interruption/end of the service. The user selects the kind of the

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indication by, for example using a keyboard. In FIG. 8, during the supply of the service, if the situation detection section 1 detects infringement by a non-user ("Yes" at step S11), the service supply permission section 2 sends the warning to the user (step S20). After sending the warning, the interactive control section 4 receives an indication of the user (step S21), the service supply permission section 2 controls [controls] the supply of the service according to the indication.

In column 8, line 32.

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If the user indicates end of the service ("END" at step S21), the interactive [interactive] control section 4 outputs the indication of end to the service supply permission section 2. The service supply section 3 finishes the supply of the service.

In column 8, line 41.

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In this way, when the user receives the warning of infringement, the user can select continuation/interruption/end of service by using interactive function. As a result, if the user works through equipment in an office, whenever an office colleague (person not necessary for security) stands behind the user, interruption of the work is excluded. In short an interruption, [a change for the worse] of use [-feeling] of the equipment is avoided. Otherwise, when using the equipment in a public place, interruption of the service is indicated by the user for the warning of a non-user standing behind the user.

In column 9, lines 9 and 23.

C20
FIG. 9 is a flow chart of processing of the service supply permission section 2. In FIG. 9, steps S20, S21, S22, S23, and S24 are added steps in comparison with FIG. 3. The construction of the security apparatus of the fifth embodiment is the same as in FIG. 7. In FIG. 9, during the supply of the service, if the situation detection section 1 detects an infringement situation ("Yes" at step S11), the service supply permission section 2 sends the warning to the user (step S20). After the warning, the interactive control section 4 receives indication of the user. In this case, if no indication of the user is received above predetermined time (step S22 and S23), the interactive control section 4 outputs the purport of no indication to the service supply permission section 2. The service supply permission section 2 controls [controls] the supply of the service according to a predetermined control (step S24). For example, if continuation of the service is set as the predetermined control ("CONTINUATION" at step S24), the service supply section 3 continues to supply the service. If interruption of the service is set as the predetermined control ("INTERRUPTION" at step S24), the service supply section 3 interrupts the supply of the

(C20)
C20
C21

service. If end of the service is set as the predetermined controlling ("END" at step S24) the service supply section 3 finishes the supply of the service. On the other hand, if the indication of the user is received within the predetermined time ("Yes" at step S22), the interactive control section 4 receives the indication (step S21) and the service supply permission section 2 controls [controls] the supply of the service according to the indication. In this case, if the user indicates continuation of the service ("CONTINUATION" at step S21), the interactive control section 4 outputs the continuation indication to the service supply permission section 2. The service supply section 3 continues to supply the service. If the user indicates interruption of the service ("INTERRUPTION" at step S21), the interactive control section 4 outputs the interruption indication to the service supply permission section 2. The service supply section 3 interrupts the supply of the service. If the user indicates end of the service ("END" at step S21), the interactive control section 4 outputs the end indication to the service supply permission section 2. The service supply section 3 finishes the supply of the service.

In column 10, line 14.

(C21)

In the seventh embodiment, the security degree is changed by unit of the service/information. FIG. 10 is a flow chart of processing of the service supply permission section 2 according to the seventh embodiment. In FIG. 10, step S25 added between S11 and S12 is a different step in comparison with FIG. 3. During the supply of the service, if the situation detection section 2 detects infringement of the security ("Yes" at step S11), the service supply permission section 2 controls [controls] the supply of the service according to the security degree set by the kind of service/information (step S25). In this case, it may be possible that the security degree is set to a mail tool to display the mail but not set to a WP tool. For example, when another person watches the display behind the user, the mail tool is only interrupted (the mail window is closed) and the WP window is continuously opened.

In column 10, line 28.

(C22)

If the user indicates a strict secret at the header of a document, the WP window to display the document reacts to the infringement of security. For example, the security [security] degree for creating the document is dynamically changed by adding other important document. In this way, even if the service is supplied to the same object, the supply of the service is interrupted or continued according to the content (for example, regular document or strict secret document).

In column 11, line 15.

In this way, in the eighth embodiment, detection of the visual line of the user controls [controls] the supply of the service. Therefore, when another person walks behind the user, security of the service is kept only if the visual line of the user departs from the display.

C23 In column 11, lines 21 and 29.

In the eighth embodiment, a direction of the visual line of the user controls [controls] the supply of the service. However, if another person looks furtively at the display behind the user, the supply of the service can not be controlled. If the user turns his eyes away from the display whenever the other person walks behind the user, the supply of the service is interrupted to every time. Therefore, in the ninth embodiment, detection of the visual line of the non-user controls [controls] the supply of the service.

C24 In column 12, lines 3 and 16.

In the tenth embodiment, detection of the visual line of the user and the non-user controls [controls] the supply of the service. FIG. 16 is a flow chart of processing of the service supply permission section 2 according to the tenth embodiment. In FIG. 16, step S26 and step S27 are added steps in comparison with FIG. 3. During the supply of the service, assume that the situation detection section 1 detects that the user is under a situation to be supplied the service ("Yes" at step S8). In this case, the visual line detection section 16 detects movement of the visual line of the user. If the visual line of the user departs from the predetermined area, for example, the user turns his eyes away from the display ("Yes" at step S26), the situation detection section 1 outputs the visual line information D5 to the service supply permission section 2. Then, the service supply permission section 2 controls [controls] the service supply section 3 to interrupt the supply of the service (step S12).

C25 In column 12, line 31.

On the other hand, assume that the direction of the user points to the predetermined area of the display (the user does not turn his eyes away from the display) ("No" at step S26) and the situation detection section 1 detects that the non-user infringes the service of the user ("Yes" at step S11). In this case, the visual line detection section 16 keeps watch for movement of the visual line of the non-user. If the direction of the visual line of the non-user points to the predetermined area of the display (the non-user watches the display behind the user) ("No" at step S27), the situation detection section 1 outputs the visual line information to the service

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WJL supply permission section 2. The service supply permission section 2 controls [controls] the service supply section 3 to interrupt the supply of the service (step S12).

In column 12, line 34.

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In this way, in the tenth embodiment, detection of the visual line of the user and the non-user controls [controls] the supply of the service. Therefore, the security of the service for the user is strengthened.

In column 12, line 63.

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In the above embodiments, the image is used for detecting the person information. However, sound or wireless may be used for detecting the person information. In case of the sound, the user is specified by the user's voice existing in the service-use area. If the user's voice is continuously detected, it is decided that the user is under a situation to be supplied the service. If a voice other than the user's is detected, it is decided that the security of the service of the user is infringed. In case of the wireless, the user is specified by detecting ID information of a wireless card. The user previously brings the wireless card with him. If the ID information of the user's wireless card is continuously detected, it is decided that the user is under a situation to be supplied the service. If ID information other than the user's wireless card is detected, it is decided that the security [security] of the service of the user is infringed.